

AND

U S E

OF THE

# COMPOUND MICROSCOPE,

As made and fold by

~~THOMAS~~ D NAIRNE, *J Blunt*

At Number 20, in CORNHILL, opposite the  
ROYAL EXCHANGE,

L O N D O N.



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DESCRIPTION



E

OF THE  
Compound Microscope

As made and sold by

~~ADAM~~ NAIRN

At Number 20, in Cornhill, opposite the  
Royal Exchange

LONDON

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DESCRIPTION  
AND  
USE  
OF THE  
COMPOUND MICROSCOPE.



**T**HE Box being opened, it is necessary to observe how the Microscope and its Apparatus are placed, as it is so contrived, in Order to make it portable when the Box is shut: Every Thing therein contained is secured from any Damage that might otherwise happen from their being loose in conveying it from one Place to another. At the End B is a Piece of the Box that pulls off as represented, marked A: Then the square Pillar which moves on a Joint at the Bottom of the Box is to be raised upright; or, if required, will be fast in any Position or Angle you would chuse to have it in; which is found to be very convenient, supposing a Person would use it sitting, and is an Advantage this Microscope has peculiar to itself. Then the Button C being unscrewed, the Brass horizontal Plate D may be moved down, so that the Body of the Microscope E may be taken out: then putting the small End of the said Body into the conical Hole F of the Arm G, it will there be firmly supported, and the Microscope will appear as represented in the Plate. H, a

reflecting Mirrour in a Brass Semicircle, which is fastened to the Brass Arm I, is to reflect Light either from the Sky or Candle, directly upwards on the Objects you would examine. *c* is a convex Glas, whose Use is to throw a Light on an opaque Object by Means of a Candle. 1, 2, 3, 4, 5, and 6, are Magnifiers set in Brass Cells; The N<sup>o</sup>. 1 magnifies the most and the No. 6 the least. Each of these when used are to be screwed on the small End of the Microscope K. In the Partition L are 8 Ivory Sliders, in six of which are different Objects, a List of which are undermentioned; the other two, left vacant, are to be filled at Pleasure. M is the Slider-holder, N a Fish-pan, O is small Glas Tubes, to hold various small Objects that Gentlemen may be curious enough to collect; for Instance, the ~~Neat~~ or Tad-pole; of which the Circulation of the Blood may be ~~very~~ seen when magnified by this Microscope. The largest of these Tubes when used is to be fixed between the two Springs under the Stage D; the smallest may be used in the Slider-holder M, the same as the Ivory Sliders with Objects in them. P, a Brass Box, with two Glasses, set at some Distance one from the other, in Order to contain living Objects, by unscrewing them asunder, to receive the Objects you would examine, and skrewing them together, if required, to confine them; each of which Glasses is to be used separately in seeing the Animalcula in Fluids, by putting a Drop on either of them, and applied to the Microscope. Q is a Pair of Pincers, with a Point at one End, either to hold an Object between, or stick an Object upon. T, a Brass Cone, which is made to fit on a Rim under the Stage D, in Order to check the Light when the first or second Magnifier is made Use of; for some Objects appear more distinct by cutting off some of the oblique Rays reflected by the Mirror H. V is an Ivory Box, containing Talc at one End, and Wires at the other, fitted to the Holes in the Ivory Sliders, in Order to supply what may be lost, or to be changed at Pleasure. W is a Pair of Brass Tongs, to take up any small Objects. In the Brass Tube, S, is represented a small Hair Pencil, whose Use is to brush the Dust off the Talcs that contain the Objects in the Ivory Sliders; for were they to be wiped with Linen, or touched with the Finger, they would be so soon scratched and rubbed,

*newt*  
*Dela*



rubbed, as to render the Objects contained between them very obscure, consequently unfit for Use.

In Order to make this Microscope useful to Gentlemen that are unacquainted therewith, you have the following Examples.

First. To examine any Object in the Ivory Sliders, (the Microscope being placed as represented, or in any Angle, as before observed,) screw on either of the Magnifiers in the Brass Cells on the small End of the Microscope K: then put the Slider-holder M into the Hole 7 of the horizontal Plate D, with an Ivory Slider between the two Plates of the said Slider-holder M; then slide the horizontal Plate D up or down, till the upper Edge of the Brass Socket, to which the Stage or horizontal Plate D is fixed, comes exactly to the Mark on the square Pillar, figured according to the Magnifier made Use of: Then push back the Slider by the Pin at the Top of the Microscope a; and, on looking through, if the Object should appear confused, screw the Button C fast, and turn the Button with the long Screw X, (which will then either raise or depress the Stage D, which carries the Objects,) till it appears distinct, first observing to throw the Light up, from the Mirror H, on the Objects.

Secondly. To examine an opaque Object, take away the Slider-holder, M, and put the Pair of Pincers, g, which are made to fit in the Hole 9 of the Stage D, with a small Ivory Cylinder fixed thereto, to lay your Objects on. Take the Silver Speculum, which is in the Brass Box R, and screw it on the Brass Tube S; then slide the said Tube, with the Speculum, on the small End of the Microscope, to the Circle figured thereon, according to the Magnifier you have screwed on the Bottom of the Microscope K: Then the Light, being thrown up by the Mirror H, is reflected back by the Silver Speculum on the Object: And on looking through the Microscope, if the Object should appear confused, move the Stage D, to which the Object is fixed, gently up or down, till you see the Object distinct, not regarding the Figure on the square Pillar, as the opaque Objects may not be at the same Distance as a

Slider fixed in the Slider-holder M ; which is what the Microscope is marked and figured for. If your Object is white, lay it on the black Side of the Ivory ; if black, the contrary. If this Microscope is used by Candle-Light, beside the above-mentioned Way of seeing opaque Objects, a bright Spot may be thrown on the Object by the convex Glass *e*.

To see the Circulation of the Blood in a Fish, take the Fish-pan N, and bind the Fish down with the Ribband, with the Tail over the oblong Hole : Then apply the Button at the Bottom of the said Pan into the Slit 8 of the Stage D, till the oblong Hole, with the Tail of the Fish, comes over the Hole or Center of the Stage D : then adjust it, by Means of the Button X, to the Focus of the Magnifier, till you see it distinctly, not regarding the Number of the Magnifier whether it corresponds with the Figures on the square Pillar, for the same Reasons before observed in viewing opaque Objects. Also in viewing any Objects in the Glass Tubes the Figures on the square Pillar are not to be regarded for the same Reason abovementioned.

These few Examples carefully observed, I make no Doubt but, after a little Practice, this Microscope will be found the most useful of any yet extant.

Observe, when you have done using the Microscope, and would shut it up, turn the Mirrour H on one Side ; then take the Body of the Microscope from the Arm G, and put the narrow End into the Hole 7 of the Plate D ; then draw up the said Plate D with the Body of the Microscope, till the Eye-End *a* goes into the conical Hole E : Then the Button C, being screwed, will keep it fast. Turn the Pillar, with the Body of the Microscope, into the Box ; then, putting on the Piece A, you may shut the Box.

A LIST

A LIST of the OBJECTS.

Number I. next the Crofs.

Down of a Thistle.  
Ditto of a Moth's Wing.  
Human Hair.  
Mouse Hair.

Number II.

A Piece of Fennel.  
A Ditto of Cork.  
A Ditto of Sponge.  
Pith of Elder.

Number III.

Eye of a Fly.  
Wing of Ditto.  
Legs of Ditto.  
Sting of a Wasp.

Number IV.

Scale of a Soal.  
Ditto of a Perch.  
Ditto of a Dace.  
Ditto of a Tench.

Number V.

A Slice of Sycamore.  
A Ditto of Wild Bryer.  
A Ditto of Hazle.  
A Ditto of Vine.

Number VI.

A Bug.  
A Flea.  
A Louse.  
Ground Moss.